AV SURROUND PROCESSOR

SS-992

SERVICE MANUAL

KENWOOD

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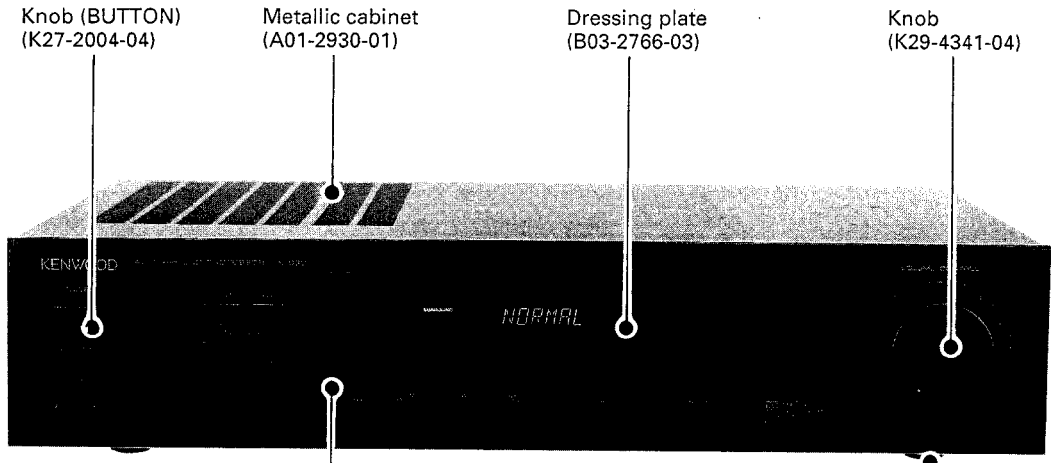
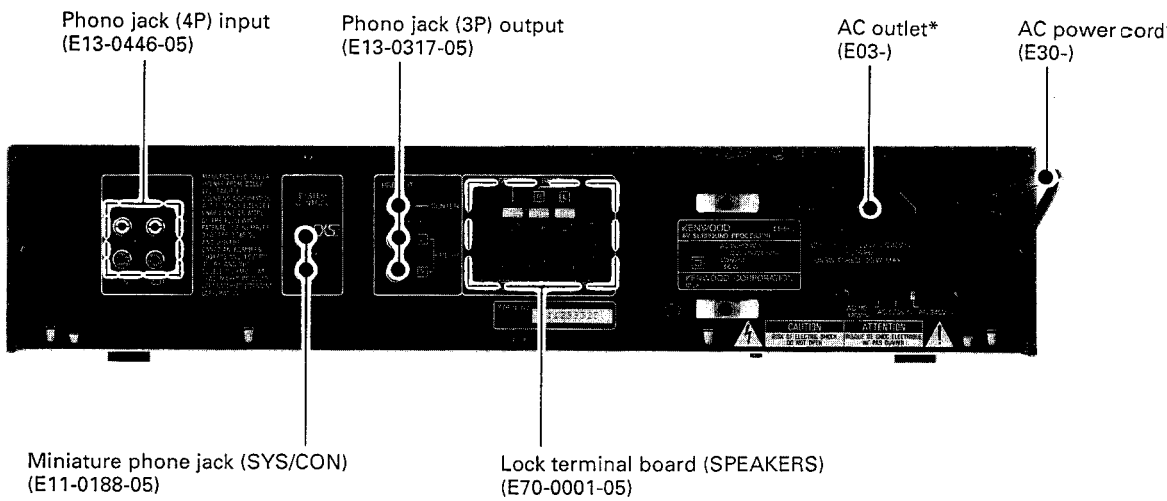
B51-4458-00(O)2345





*** Refer to parts list on page 23.**

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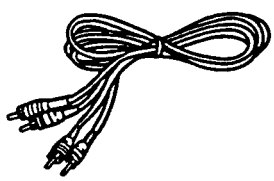
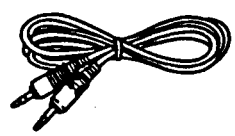
ACCESSORIES

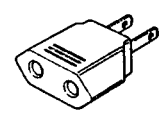
• Audio cord 2
(E30-0615-05)



• Cord with plug 1
(E30-1392-05)

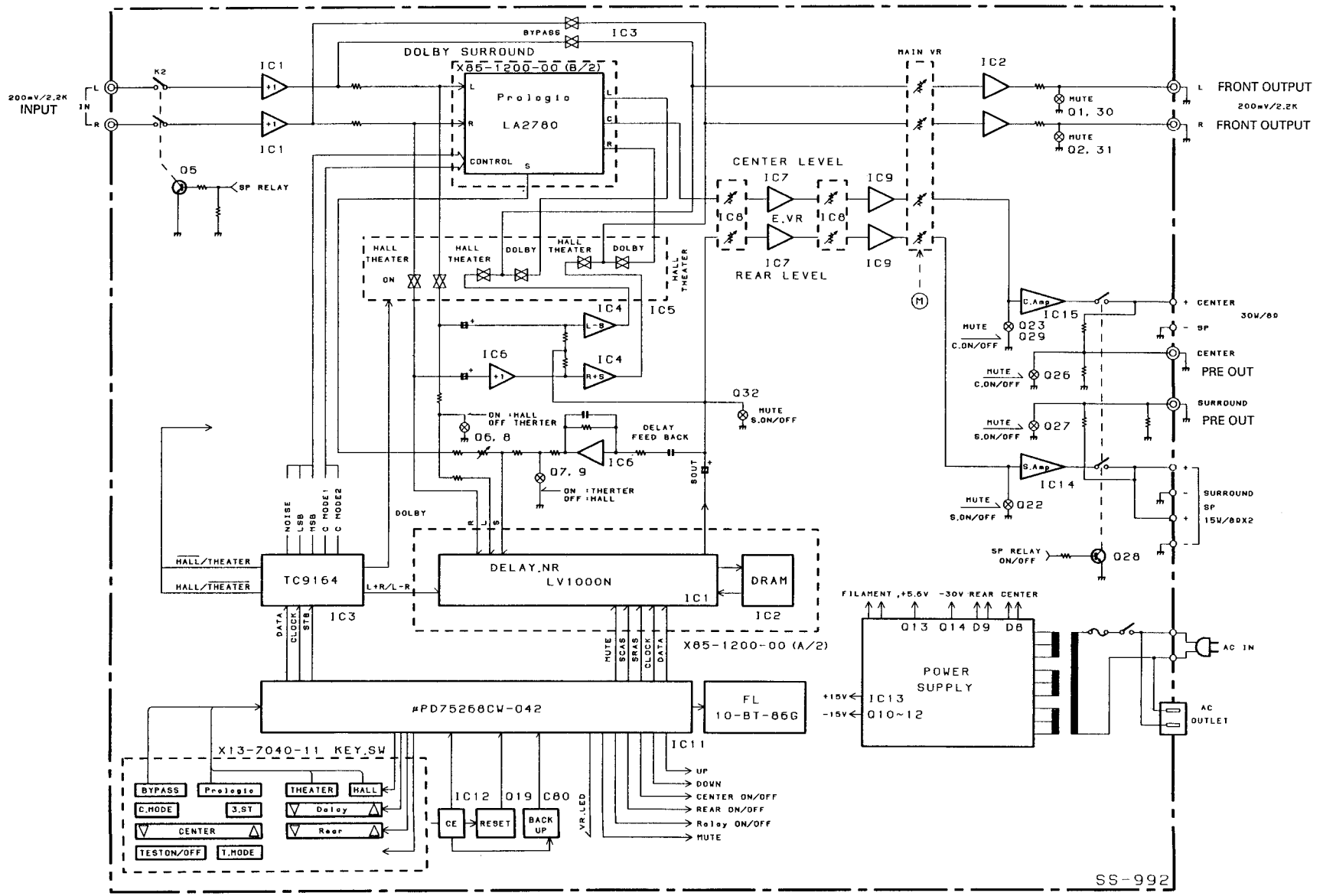


• AC plug adapter 1
(E03-0115-05)



*M type only

BLOCK DIAGRAM



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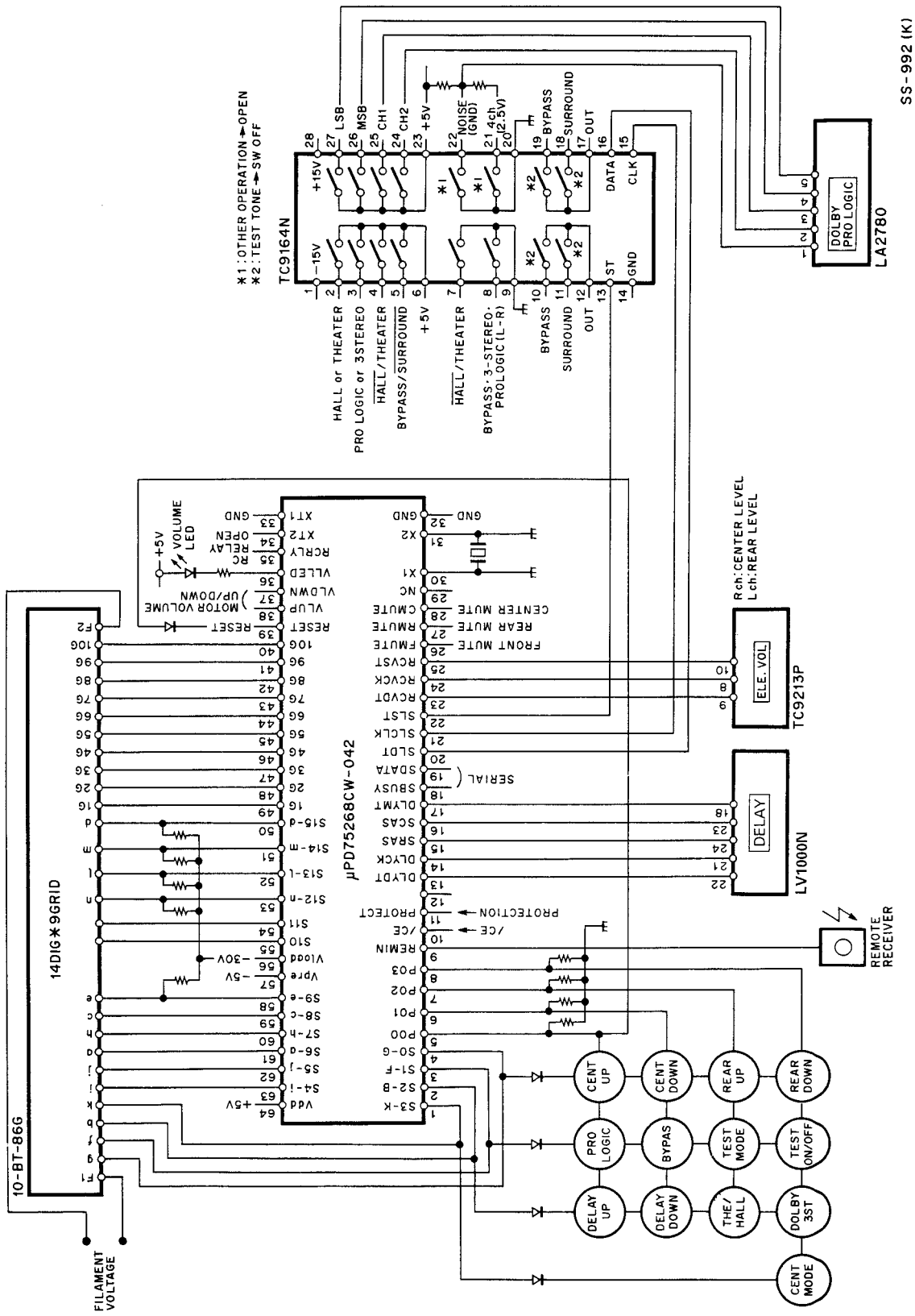
CIRCUIT DESCRIPTION

1. Microprocessor : μPD75268CW-042 (IC11 X08-2500-10)

1-1. Terminal connection diagram



CIRCUIT DESCRIPTION

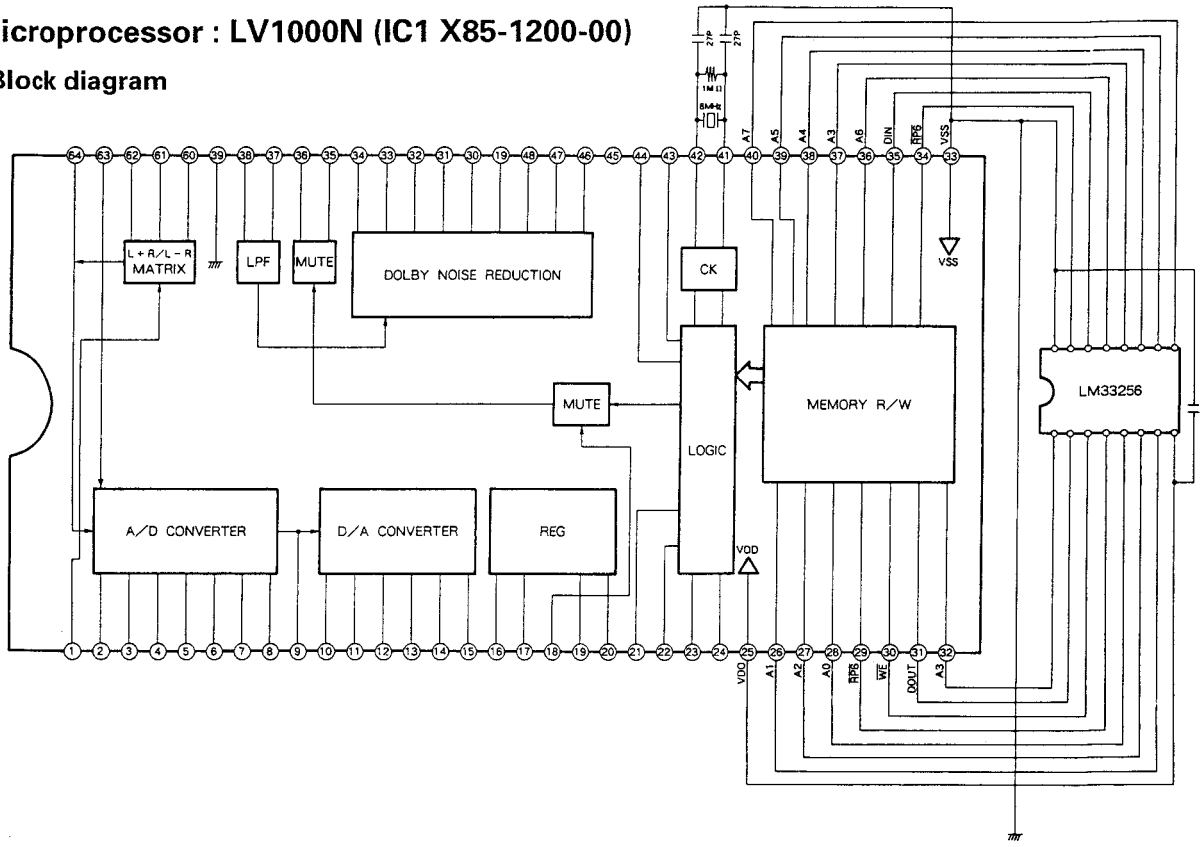
1-2. Terminal function (μPD75268CW-042)

Pin No.	Pin name	I/O	Name	Function
1 ~ 3	S3 ~ 1	O		Segment port (K.B.F.G)and key scan
5 ~ 8	P00 ~ 03	I		Key input port
9	P10 / INT0	I	REMIN	Remote control receive port
10	P11	I	$\overline{PCE}$	Chip enable port
11	P12	I	PROTE	Protection input port
12	P13	I	–	No use
13	P20	O	DLYDT	LV1000N control port (DATA)
14	P21	O	DLYCK	LV1000N control port (CLK)
15	P22	O	SRAS	LV1000N control port (SRAS)
16	P23	O	SCAS	LV1000N control port (DLYMT)
17	P30	O	DLYMT	LV1000N control port (MUTE)
18	P31	O	SBUSY	Serial data (BUSY)
19	P32	O	SDATA	Serial data (DATA)
20	P33	O	SLDT	TC9164N control port (DATA)
21	P60	O	SLCLK	TC9164N control port (CLK)
22	P61	O	SLST	TC9164N control port (ST)
23	P62	O	RCVDT	TC9164N control port (DATA)
24	P63	O	RCVCK	TC9164N control port (CLK)
25	P40	O	RCVST	TC9164N control port (ST)
26	P41	O	$\overline{FMUTE}$	Front-mute control port
27	P42	O	$\overline{RMUTE}$	Rear-mute control port
28	P43	O	$\overline{CMUTE}$	Center-mute control port
29	NC	–	–	Internality connected (Open)
30	X1	I	–	Clock oscillator (4.19MHz)
31	X2	I	–	Clock oscillator (4.19MHz)
32	–	–	–	GND
33	XT1	I	–	GND
34	XT2	I	–	Open
35	P50	O	RCRLY	Relay control port of rear and center speaker (H : on / L : off)
36	P51	O	VLLED	Volume-LED control port
37	P52	O	VLDWN	Volume-down control port
38	P53	O	VLUP	Volume-up control port
39	RESET	I	$\overline{RESET}$	Reset port
40 ~ 49	T0 ~ 9	O	–	Grid port (1G ~ 10G)
50 ~ 53	S15 ~ 12	O	–	Segment port (D.L.M.N)
54, 55	S10, 11	O	–	No use
56	V_{LOAD}	I	–	–30V
57	V_{PRE}	I	–	–5V
58 ~ 63	S9 ~ 4	O	–	Segment port (E.C.H.A.J.I)
64	V_{DD}	I	–	5V

CIRCUIT DESCRIPTION

2. Microprocessor : LV1000N (IC1 X85-1200-00)

2-1. Block diagram



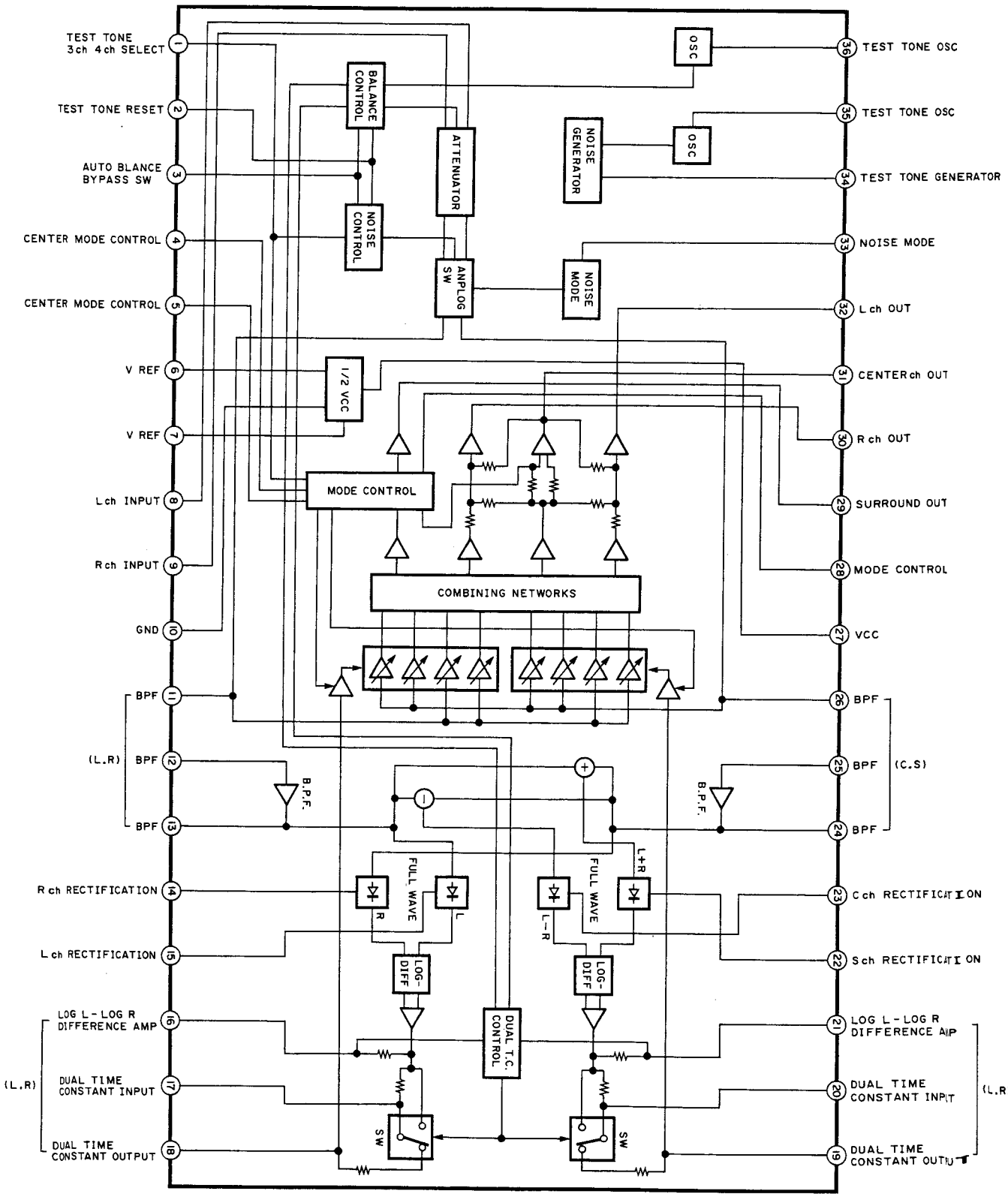
2-2. Pin description

Pin No.	Description	Pin No.	Description
1	Delay input signal changeover switch (L+R/L−R)	42	Crystal oscillator for oscillation circuit
2	Comparator power supply filter	43	Switching between long and short modes
3, 15	Detection input filter	44	Switching between serial and parallel inputs
4, 14	Detection input filter	45	Test mode pin. Normally open or Vss.
5, 13	Pre-emphasis capacitor	46	NR smoothing capacitor
6, 12	Sliding band filter capacitor	47	NR smoothing capacitor
7	Sliding band filter capacitor and local decoder output	48	Capacitor for control amplifier frequency characteristics
8, 10	Capacitor for smoothing detection output	49	Variable resistor input
9	Capacitor for de-coupling operating threshold voltage	50	NR input
11	Sliding band filter capacitor and delay output	51	7-kHz low-pass filter output
16	Reference voltage (1/2 Vcc), primary	52	NR input
17	Reference voltage (1/2 Vcc), secondary	53	De-coupling capacitor
18	Mute control input pin	54	Delay output and NR output
19	Vcc	55	Mute circuit input
20	VDD output	56	Mute circuit output
21	Clock for serial input, data input for parallel input	57	7-kHz filter output
22	Data for serial input, data input for parallel input	58	7-kHz filter input
23	Column address selection for serial input, data input for parallel input	59	GND
24	Row address selection for serial input, data input for parallel input	60	R channel input
25	VDD	61	L channel input
26~40	Connection with memory IC	62	Matrix output de-coupling capacitor
33	Vss	63	Noise shaping and delay input
41	Crystal oscillator for oscillation circuit	64	Noise shaping output

CIRCUIT DESCRIPTION

3. Microprocessor : LA2780 (IC4 X85-1200-00)

3-1. Block diagram



CIRCUIT DESCRIPTION/ADJUSTMENT

4. TEST MODE

4-1. Setting

With pressing both PRO LOGIC and THEATER / HALL keys, press Power switch.

4-2. Operation

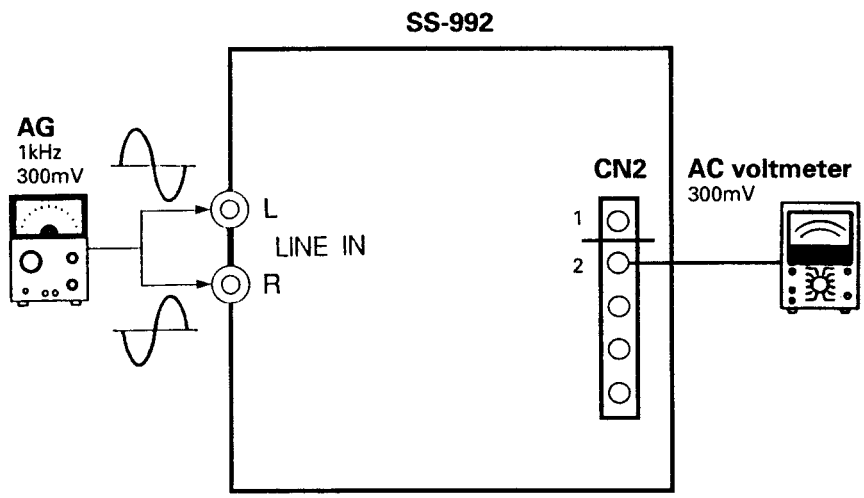
• All segments light (if press any key, be in normal).

• Key and operation

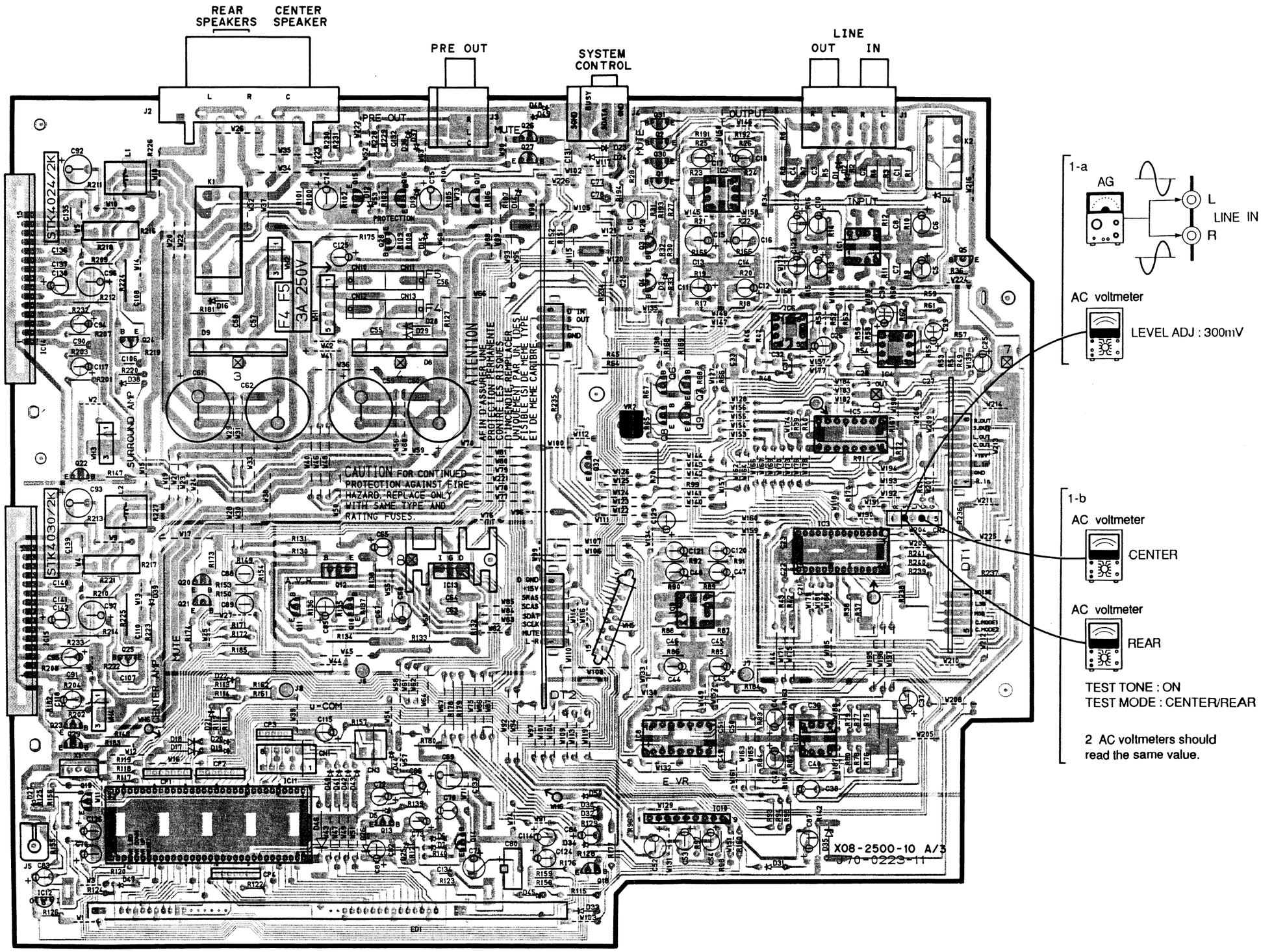
KEY	OPERATION
TEST TONE ON / OFF	VOLUME UP
TEST TONE MODE	VOLUME DOWN
BYPASS	VOLUME STOP
CENTER LEVEL UP (PRO LOGIC, 3 STEREO)	–10dB→0dB→–20dB→–40dB ↑
REAR LEVEL UP (PRO LOGIC, HALL/THEATER)	–10dB→0dB→–20dB→–40dB ↑
DELAY TIME UP (PRO LOGIC, HALL/THEATER)	30ms
DELAY TIME DOWN (PRO LOGIC)	15ms
DELAY TIME DOWN (HALL/THEATER)	0ms

ADJUSTMENT

No.	ITEM	INPUT SETTING	OUTPUT SETTING	PLAYER SETTING	ALIGNMENT POINT	ALIGN FOR	FIG
1-a	LEVEL ADJ	Connect AG(anti-phase,1kHz,300mV) to LINE-INs.	Connect AC voltmeter to CN-2-2.	-	VR2	300mV	
1-b	LEVEL ADJ	-	Connect 2 AC voltmeters to CN-2-2(REAR) and CN2-4(CENTER).	TEST TONE: ON TEST MODE: CENTER/ REAR	VR2	2 AC voltmeters should read the same value.	



PC BOARD (COMPONENT SIDE VIEW)



1-a

AG

L

LINE IN

R

AC voltmeter

LEVEL ADJ : 300mV

1-b

AC voltmeter

CENTER

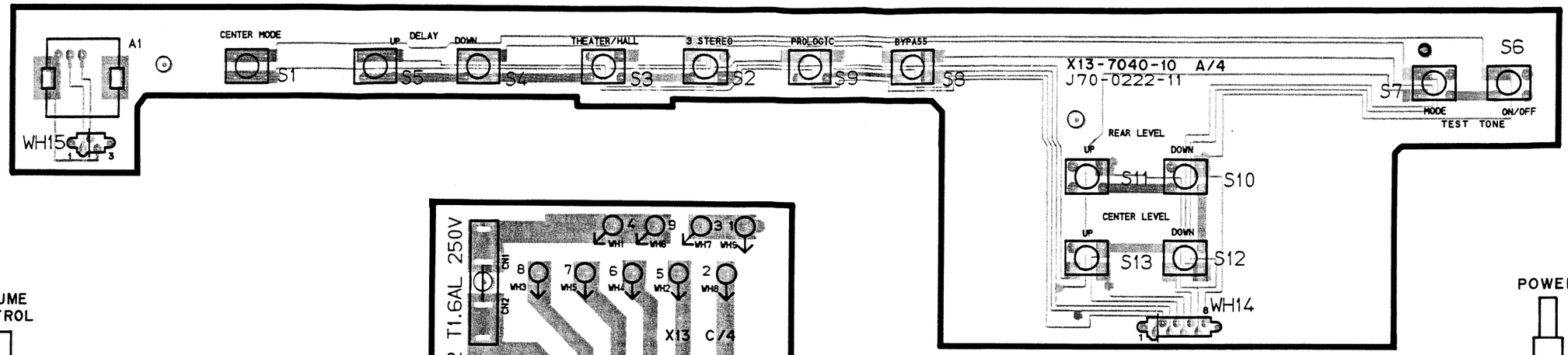
AC voltmeter

REAR

TEST TONE : ON
TEST MODE : CENTER/REAR

2 AC voltmeters should read the same value.

PC BOARD (COMPONENT SIDE VIEW)



110 — 120V ⟵ 220V ⟶ 240V

Refer to the schematic diagram for the values of resistors and capacitors.

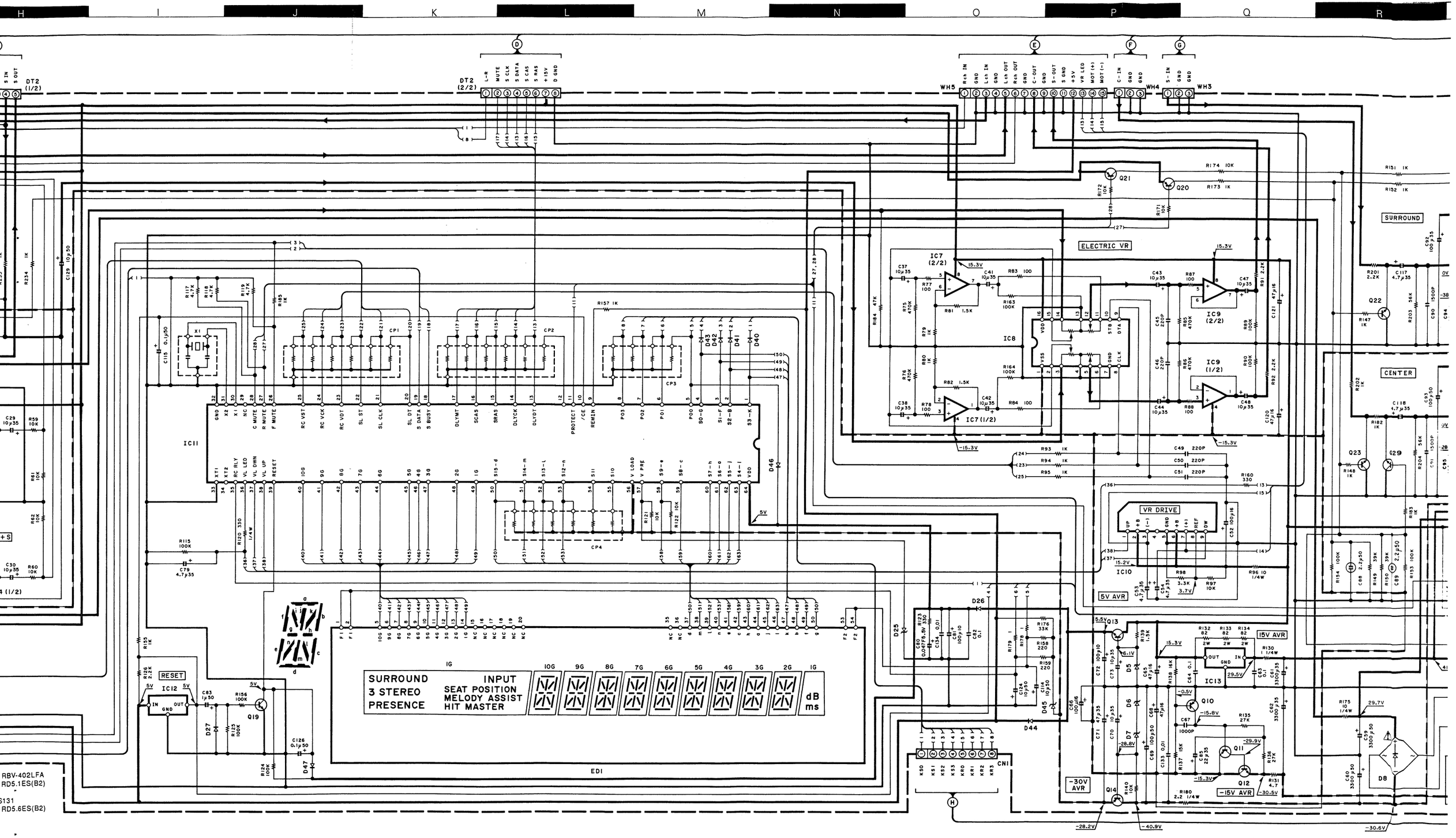
DESTINATION		ABB.	UNIT NAME	F4-7
PRODUCT-P.	COUNTRY			
JAPAN MADE	U.S.A. CANADA	K P	X08-2500-10	3A 250V
	GENERAL MARKET PX AUSTRALIA	M Y X	X08-2500-21	T2.5AL 250V
	U.S.A	KS	X08-2500-11	3A 250V
SINGAPORE MADE	GENERAL MARKET	MS	X08-2500-22	T2.5AL 250V

SIGNAL LINE
GND LINE
+B LINE
−B LINE

(X08-2500-10) (A/3)

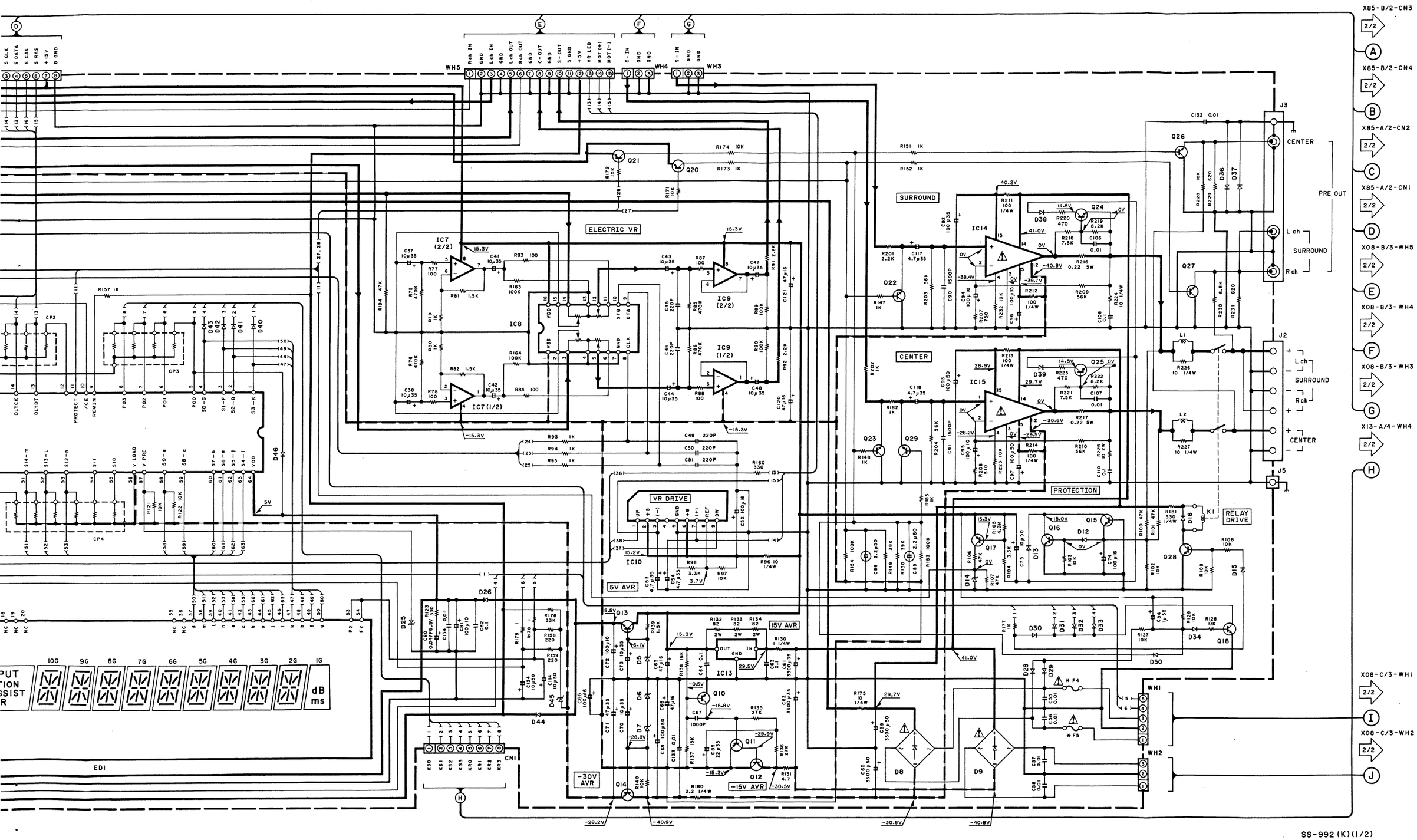
IC1 : TA8409S
IC11 : μPD75268CW-042
IC12 : PST529D
IC13 : μPC7815HF or TA7815S or BA17815T
IC14 : STK4024/2K
IC15 : STK4030/2K

IC1,2,4,6,7,9	: RC4565D-D or NJM4565D-D	Q1,2,8,9,22,23, 26,27,29~31	: 2SC2878(B)	Q4,5,13	: 2SC2003(L,K)	D1,2,4,12,13,15~24,26,27, 30~33,36,37,44,46~49	: HSS104 or 1SS133	D8,9	: D3SBA20F03 or RBV-402LFA
IC3	: TC9164N	Q3,6,7,10,11,17, 20,21	: 2SA933S(Q,R) or 2SA1048(Y,GR)	Q12	: 2SD2012 or 2SD2374 or 2SD2061	D3,35	: HZS3.9N(B2) or RD3.9ES(B2)	D14,25	: HZS5.1N(B2) or RD5.1ES(B2)
IC5	: TC9215P			Q14	: 2SB764	D5	: HZS6.2N(B2) or RD6.2ES(B2)	D28,29,34, 38~43,50	: HSS104A or 1SS131
IC8	: TC9213P			Q15,16,18,19	: 2SC1740S(Q,R) or 2SC2458(Y,GR)	D6,7	: HZS15N(B) or RD15ES(B)	D45	: HZS5.6N(B2) or RD5.6ES(B2)
				Q24,25	: 2SC1845(F,E)				
				Q28	: 2SC2320(E,F)				



- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instru or/and units

CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



SS-992 (K) (1/2)

- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units

CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y09-4000-10

SS-992

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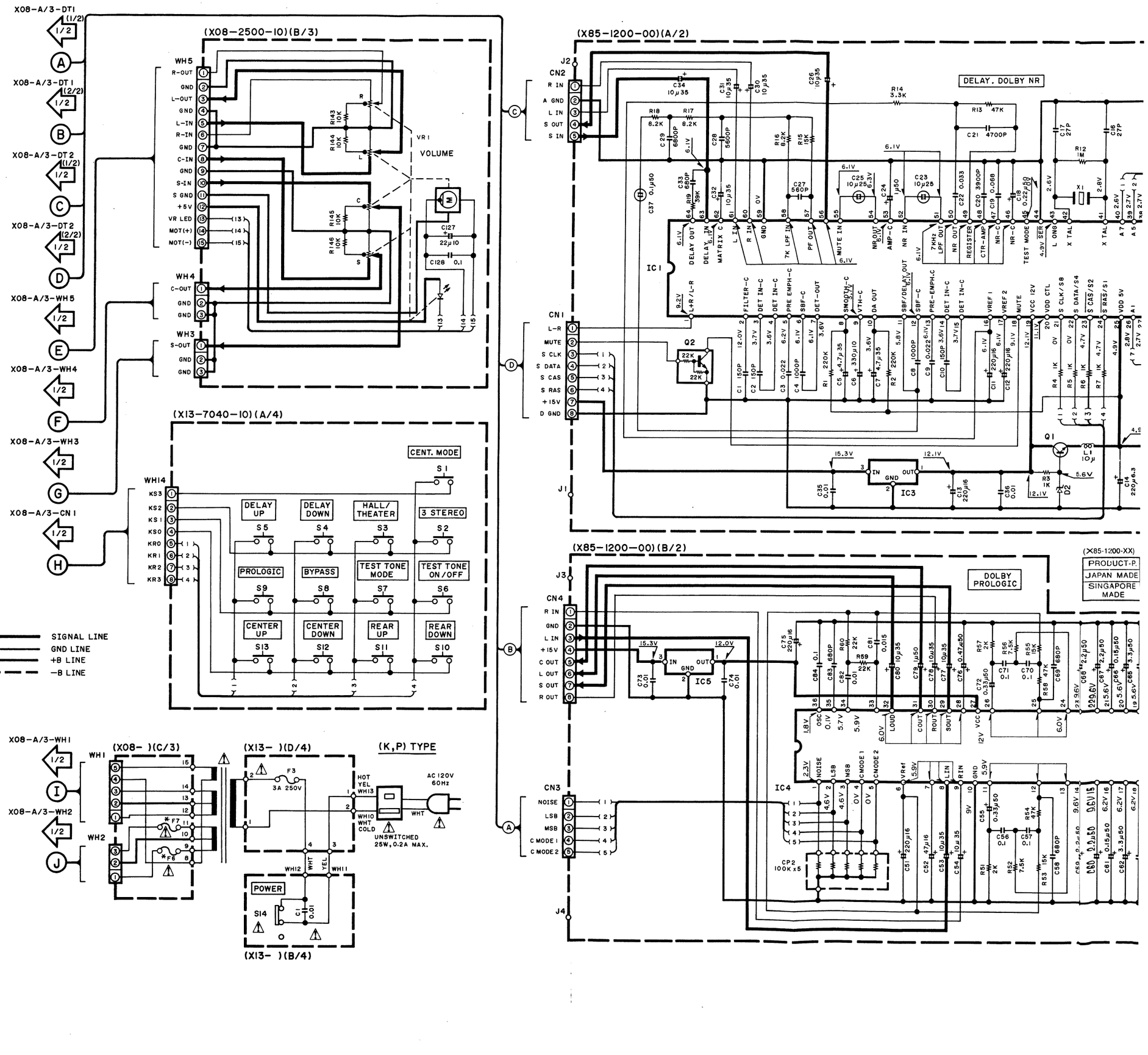
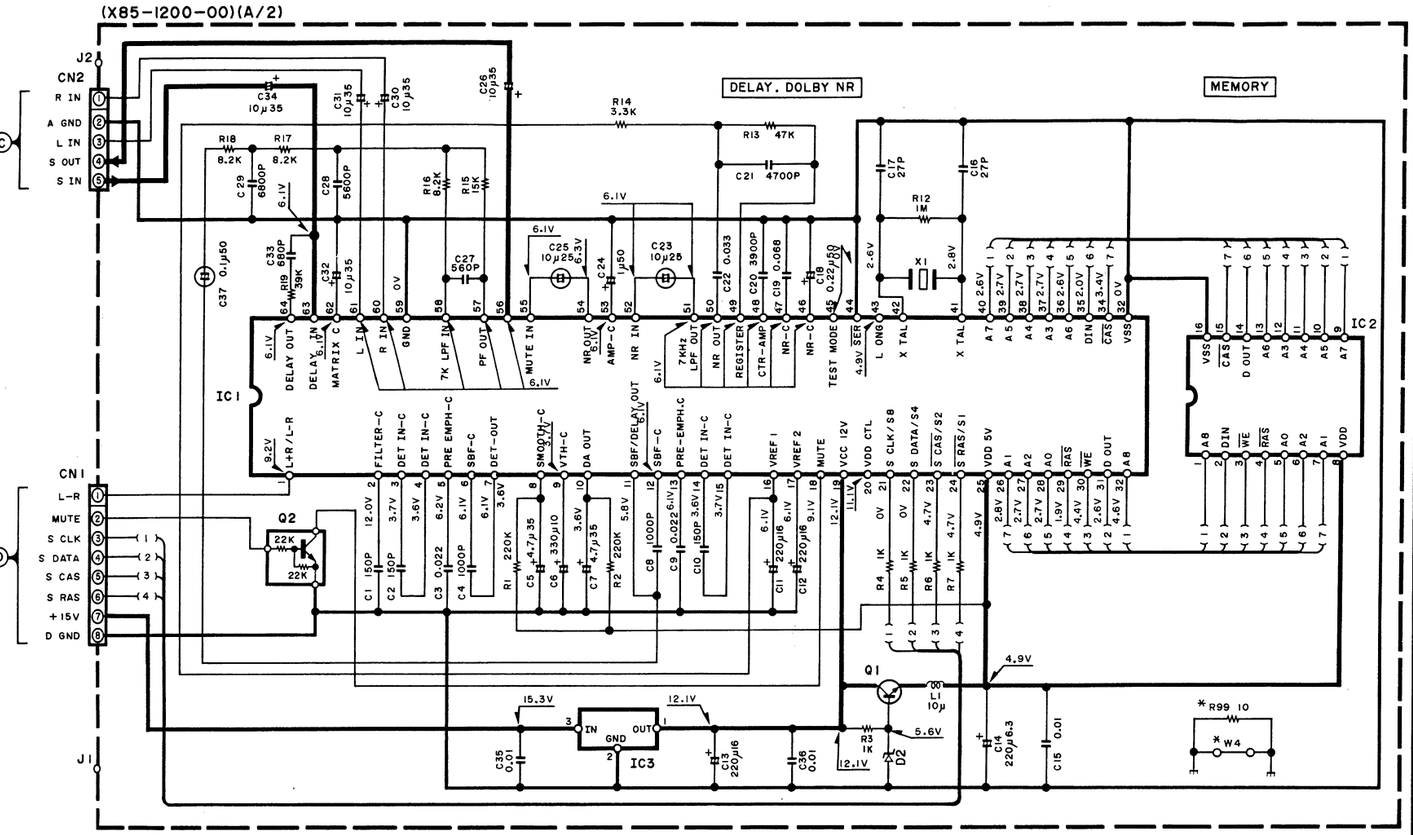
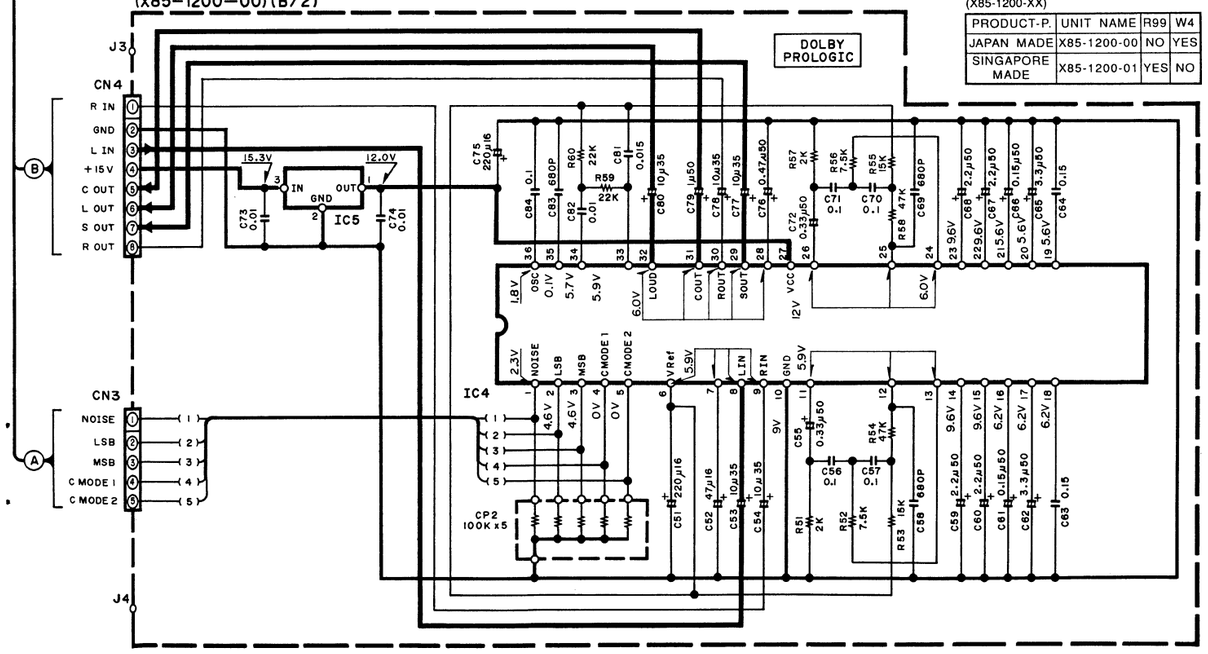

(X08-2500-10)(B/3)
WH5
R-OUT
GND
L-OUT
L-IN
R-IN
C-IN
S-IN
S GND
+5V
VR LED
MOT(+)
MOT(-)
VR1
VOLUME
WH4
C-OUT
WH3
S-OUT
X08-A/3-DT1 (1/2)
X08-A/3-DT1 (2/2)
X08-A/3-DT2 (1/2)
X08-A/3-DT2 (2/2)
X08-A/3-WH5
X08-A/3-WH4
X08-A/3-WH3
X08-A/3-CN1
(X13-7040-10)(A/4)
WH14
KS3
KS2
KS1
KS0
KR0
KR1
KR2
KR3
CENT. MODE
DELAY UP
DELAY DOWN
HALL/ THEATER
3 STEREO
PROLOGIC
BYPASS
TEST TONE MODE
TEST TONE ON/OFF
CENTER UP
CENTER DOWN
REAR UP
REAR DOWN
SIGNAL LINE
GND LINE
+B LINE
−B LINE
X08-A/3-WH1
X08-A/3-WH2
(X08-)(C/3)
WH1
WH2
(X13-)(D/4)
(K,P) TYPE
F3
3A 250V
HOT
YEL
WH13
WH10
WHT
COLD
WHT
AC 120V
60Hz
UNSWITCHED
25W, 0.2A MAX.
WH12
WHT
YEL
WH11
POWER
S14
(X13-)(B/4)
(X85-1200-00)(A/2)
J2
CN2
R IN
A GND
L IN
S OUT
S IN
DELAY. DOLBY NR
IC1
CN1
L-R
MUTE
S CLK
S DATA
S CAS
S RAS
+15V
D GND
Q2
Q1
IC3
J1
(X85-1200-00)(B/2)
(X85-1200-XX)
PRODUCT-P.
JAPAN MADE
SINGAPORE MADE
J3
CN4
R IN
GND
L IN
+15V
C OUT
L OUT
S OUT
R OUT
DOLBY PROLOGIC
IC5
IC4
CN3
NOISE
LSB
MSB
C MODE 1
C MODE 2
CP2
100K x5
J4

(X85-1200-00)(A/2)



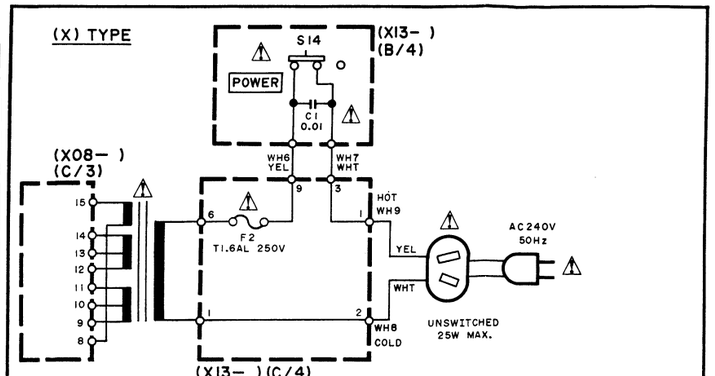
(X85-1200-00)(B/2)



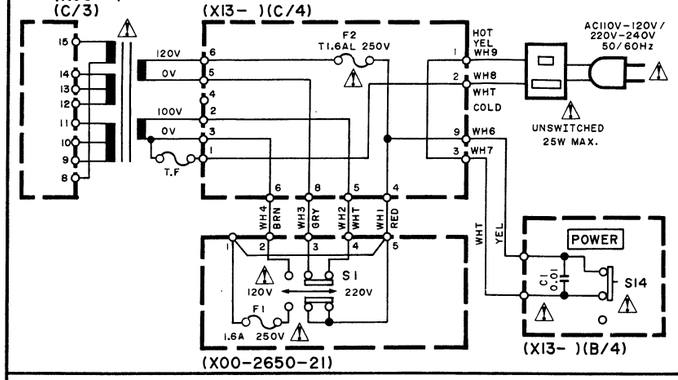
(X85-1200-XX)

PRODUCT-P.	UNIT NAME	R99	W4
JAPAN MADE	X85-1200-00	NO	YES
SINGAPORE MADE	X85-1200-01	YES	NO

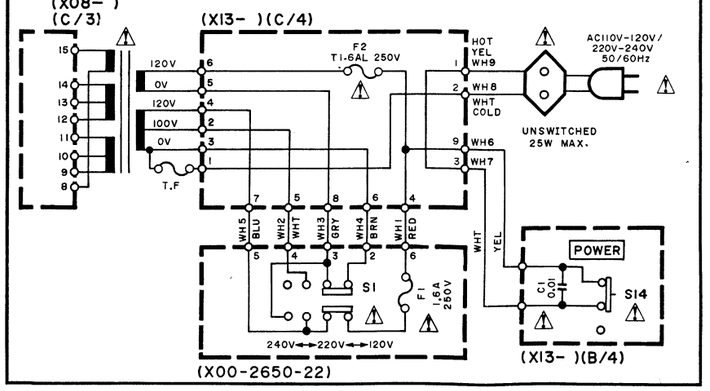
(X) TYPE



(Y) TYPE



(M) TYPE

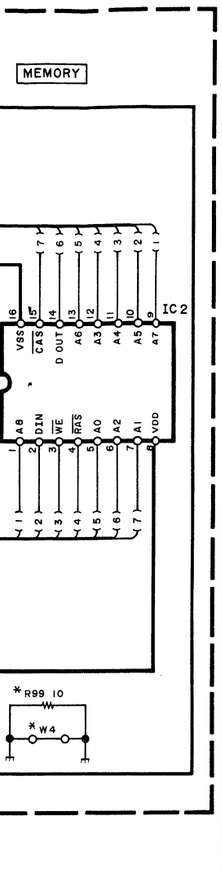


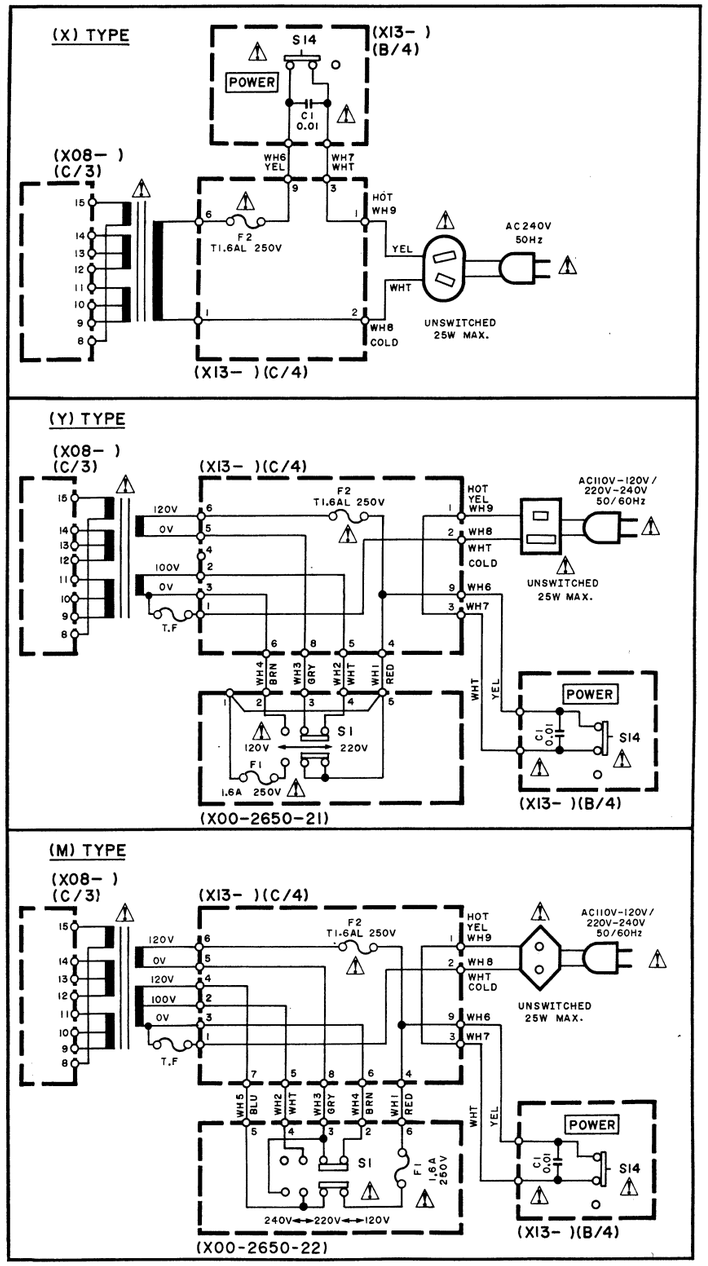
(X13-704X-XX)

PRODUCT-P.	DESTINATION		UNIT NAME
	COUNTRY	ABB.	
JAPAN MADE	U.S.A CANADA	K P	X13-7040-10
	GENERAL MARKET	M	X13-7040-21
	PX	Y	X13-7042-91
	AUSTRALIA	X	X13-7040-71
SINGAPORE MADE	U.S.A	KS	X13-7040-11
	GENERAL MERKET	MS	X13-7040-22

IC1 : LV1000N
IC2 : LM3364-15
IC3,5 : μPC78L12J
IC4 : LA2780
Q1 : 2SC3940A
Q2 : DTC124ES or RN1203
D2 : HZS5.6N(B2) or RD5.6ES(B2)

SS-992(K)(2/2)



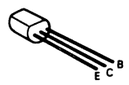


(X13-704X-XX)

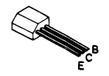
PRODUCT-P.	DESTINATION		UNIT NAME
	COUNTRY	ABB.	
JAPAN MADE	U.S.A CANADA	K P	X13-7040-10
	GENERAL MARKET	M	X13-7040-21
	PX	Y	X13-7042-91
	AUSTRALIA	X	X13-7040-71
SINGAPORE MADE	U.S.A	KS	X13-7040-11
	GENERAL MERKET	MS	X13-7040-22

IC1 : LV1000N
IC2 : LM3364-15
IC3,5 : μPC78L12J
IC4 : LA2780
Q1 : 2SC3940A
Q2 : DTC124ES
or RN1203
D2 : HZS5.6N(B2)
or RD5.6ES(B2)

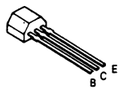
2SB764 2SC2320
2SC1845 2SC2878
2SC2003 2SC3940A



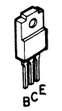
RN1203



DTC124ES 2SC1740S
2SA1048 2SC2458
2SA933S

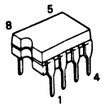


2SD2061

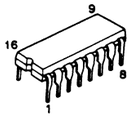


2SD2012
2SD2374

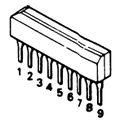
NJM4565D-D



TC9213P
TC9215P

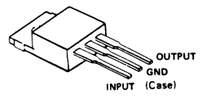


TA8409S

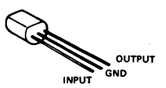


RC4565D-D

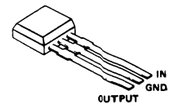
UPC7815HF



PST529D

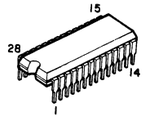


UPC78L12J

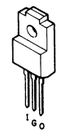


BA17815T

UPD75268CW-042



TA7815S



- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

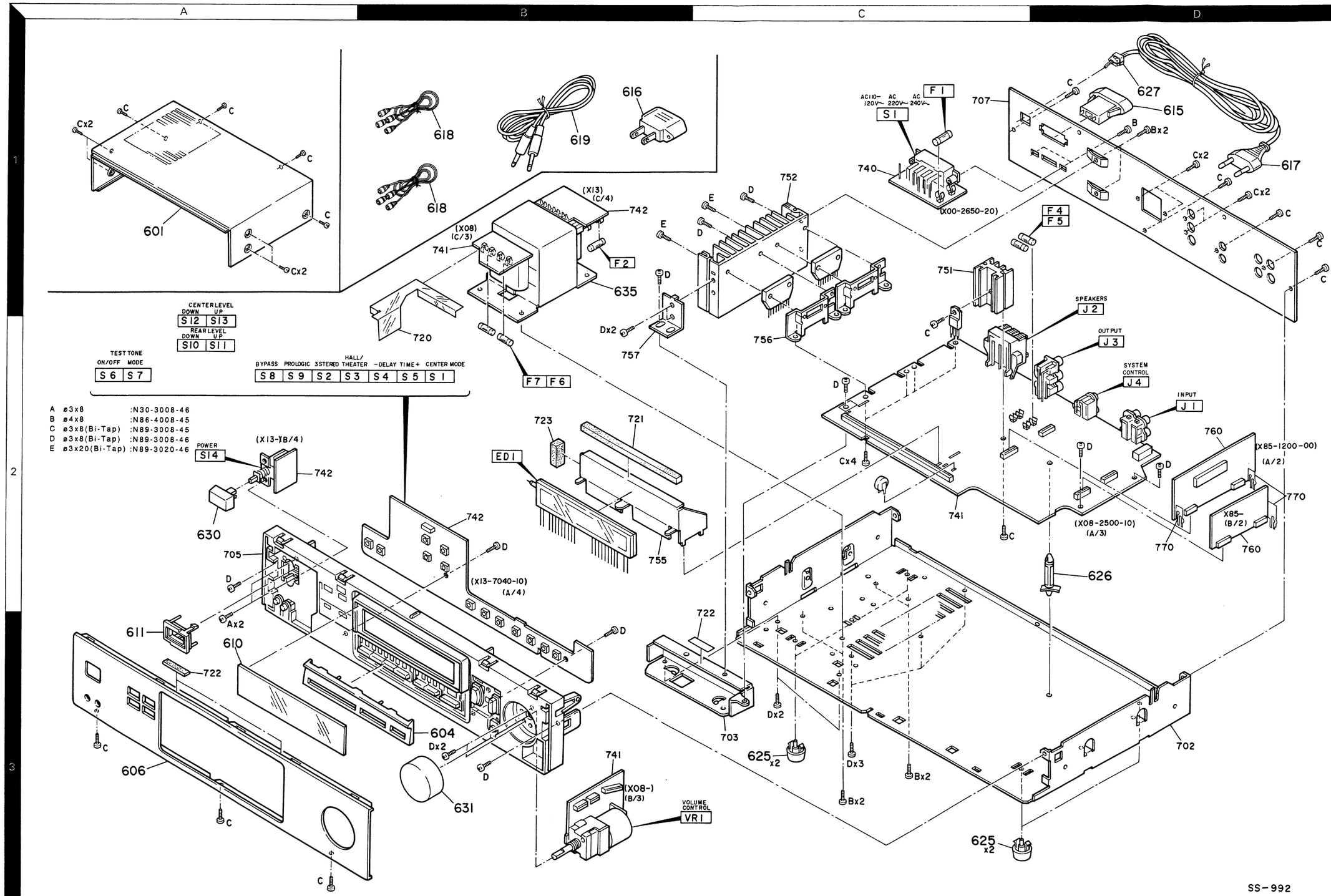
CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y09-4000-10

SS-992
KENWOOD

SS-992 SS-992

EXPLODED VIEW (UNIT)



Parts with the exploded numbers larger than 700 are not supplied.

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❶

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
			SS-992			
601	1A	*	A01-2930-01	METALLIC CABINET		
604	3B	*	A21-1810-03	DRESSING PANEL		
606	3A	*	A60-0166-02	PANEL		
610	3A	*	B03-2766-03	DRESSING PLATE		
611	3A	*	B07-2209-04	ESCUTCHEON		
-			B46-0092-13	WARRANTY CARD	K	
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-33	WARRANTY CARD	X	
-			B46-0121-13	WARRANTY CARD	P	
-			B46-0197-00	QUESTIONAIRE CARD	K	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B60-0800-00	INSTRUCTION MANUAL(ENGLISH)		
-		*	B60-0801-00	INSTRUCTION MANUAL(FRENCH)	P	
-		*	B60-0802-00	INSTRUCTION MANUAL(SPA/CHI)	M	
⚠ 615	1D		E03-0041-05	AC OUTLET	KPY	
⚠ 615	1D		E03-0055-05	AC OUTLET	M	
⚠ 615	1D		E03-0114-05	AC OUTLET	X	
⚠ 616	1B		E03-0115-05	AC PLUG ADAPTER	M	
⚠ 617	1D		E30-0459-05	AC POWER CORD	M	
⚠ 617	1D		E30-0812-05	AC POWER CORD	Y	
⚠ 617	1D		E30-0974-05	AC POWER CORD	K	S
⚠ 617	1D		E30-1341-05	AC POWER CORD	X	
617	1D		E30-2209-05	AC POWER CORD	KP	J
618	1B		E30-0615-05	AUDIO CORD		
619	1B		E30-1392-05	CORD WITH PLUG		
⚠ F1	1C		F05-1623-05	FUSE (SEMKO) (250V T1.6A)	YM	
-			H10-5252-12	POLYSTYRENE FOAMED FIXTURE		J
-			H10-5253-02	POLYSTYRENE FOAMED FIXTURE		J
-			H10-5279-12	POLYSTYRENE FOAMED FIXTURE	KM	S
-			H10-5280-02	POLYSTYRENE FOAMED FIXTURE	KM	S
-			H25-0148-04	PROTECTION BAG (110X230X0.07)		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-		*	H50-0285-04	ITEM CARTON CASE	KPYX	J
-		*	H50-0286-04	ITEM CARTON CASE	M	J
-		*	H50-0319-04	ITEM CARTON CASE	KM	S
625	3C		J02-0366-15	FOOT		
626	2D	*	J19-3330-15	UNIT HOLDER		
⚠ 627	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
630	2A		K27-2004-04	KNOB (BUTTON)		
631	3B		K29-4341-04	KNOB		
⚠ 635	1B	*	L07-0479-05	POWER TRANSFORMER	YM	
⚠ 635	1B	*	L07-0480-05	POWER TRANSFORMER	X	
⚠ 635	1B	*	L07-0481-05	POWER TRANSFORMER	KP	
			POWER SUPPLY (X00-2650-22)			
CN1 ,2			J13-0075-05	FUSE CLIP	YM	
⚠ S1	1C		S31-2131-05	SLIDE SWITCH (POWER TYPE)	Y	

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❷

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⚠ S1	1C		S31-2322-05	SLIDE SWITCH	M	
			CONTROL (X08-2500-10)			
C1 ,2			CC45FSL1H680J	CERAMIC 68PF J		
C3 ,4			CC45FSL1H221J	CERAMIC 220PF J		
C5 ,6			CE04LW1V100M	ELECTRO 10UF 35WV		
C7 ,8			CC45FSL1H680J	CERAMIC 68PF J		
C9 -12			CE04LW1V100M	ELECTRO 10UF 35WV		
C13 ,14			CC45FSL1H221J	CERAMIC 220PF J		
C15 ,16			CE04LW0J471M	ELECTRO 470UF 6.3WV		
C17 ,18			CE04LW1V100M	ELECTRO 10UF 35WV		
C19			CE04HW1HR47M	NP-ELEC 0.47UF 50WV		
C21 -23			CC45FSL1H221J	CERAMIC 220PF J		
C25 ,26			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C27 ,28			CC45FSL1H221J	CERAMIC 220PF J		
C29 ,30			CE04LW1V100M	ELECTRO 10UF 35WV		
C31			CF92FV1H333J	MF 0.033UF J		
C32			CK45FF1H103Z	CERAMIC 0.010UF Z		
C33			CC45FSL1H221J	CERAMIC 220PF J		
C37 ,38			CE04LW1V100M	ELECTRO 10UF 35WV		
C41 -44			CE04LW1V100M	ELECTRO 10UF 35WV		
C45 ,46			CC45FSL1H221J	CERAMIC 220PF J		
C47 ,48			CE04LW1V100M	ELECTRO 10UF 35WV		
C49 -51			CC45FSL1H221J	CERAMIC 220PF J		
C52			CE04LW1C101M	ELECTRO 100UF 16WV		
C53 ,54			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C55 -58			CK45FF1H103Z	CERAMIC 0.010UF Z		
C59 ,60			C90-1780-05	ELECTRO 4700UF 50WV		
C61 ,62			CE04LW1V332M	ELECTRO 3300UF 35WV		
C63 ,64			CF92FV1H104J	MF 0.10UF J		
C65			CE04LW1C470M	ELECTRO 47UF 16WV		
C66			CE04LW1C101M	ELECTRO 100UF 16WV		
C67			CK45FB1H102K	CERAMIC 1000PF K		
C68			CE04LW1C470M	ELECTRO 47UF 16WV		
C69			CE04LW1H101M	ELECTRO 100UF 50WV		
C70			CE04LW1V100M	ELECTRO 10UF 35WV		
C71			CE04LW1V470M	ELECTRO 47UF 35WV		
C72			CE04LW1A101M	ELECTRO 100UF 10WV		
C73			CE04LW1V100M	ELECTRO 10UF 35WV		
C74			CE04LW1C101M	ELECTRO 100UF 16WV		
C75			CE04LW1H100M	ELECTRO 10UF 50WV		
C77 ,78			CC45FSL1H221J	CERAMIC 220PF J		
C79			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C80			C90-1826-05	BACKUP 0.047F 5.5WV		
C81			CE04LW1A101M	ELECTRO 100UF 10WV		
C82			CF92FV1H104J	MF 0.10UF J		
C83 ,84			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C85			CE04LW1V220M	ELECTRO 22UF 35WV		
C87			CE04LW1C470M	ELECTRO 47UF 16WV		
C88 ,89			CE04HW1H2R2M	NP-ELEC 2.2UF 50WV		
C90 ,91			CK45FB1H152K	CERAMIC 1500PF K		
C92			CE04LW1V101M	ELECTRO 100UF 35WV		
C93			CE04LW1H101M	ELECTRO 100UF 50WV		
C94 ,95			CE04LW1A101M	ELECTRO 100UF 10WV		
C96			CE04LW1V101M	ELECTRO 100UF 35WV		

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❸

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C97			CE04LW1H101M	ELECTRO 100UF 50WV		
C106,107			CK45FF1H103Z	CERAMIC 0.010UF Z		
C108			CF92FV1H104J	MF 0.10UF J		
C110			CF92FV1H104J	MF 0.10UF J		
C114			CE04LW1H100M	ELECTRO 10UF 50WV		
C115			CE04LW1H0R1M	ELECTRO 0.1UF 50WV		
C117,118			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C120-123			CE04LW1C470M	ELECTRO 47UF 16WV		
C124			CE04LW1H100M	ELECTRO 10UF 50WV		
C126			CE04LW1H0R1M	ELECTRO 0.1UF 50WV		
C127			CE04HW1A220M	NP-ELEC 22UF 10WV		
C128			CF92FV1H104J	MF 0.10UF J		
C129			CE04LW1H100M	ELECTRO 10UF 50WV		
C131-134			CK45FF1H103Z	CERAMIC 0.010UF Z		
J1	2D		E13-0446-05	PHONO JACK (4P)INPUT		
J2	1D		E70-0001-05	LOCK TERMINAL BOARD(SPEAKERS)		
J3	2D		E13-0317-05	PHONO JACK (3P)OUTPUT		
J4	2D		E11-0188-05	MINIATURE PHONE JACK(SYS/CON)		
⚠ F4 -7	2B,1D		F06-3027-05	FUSE (UL) (250V 3A)	KP	
⚠ F4 ,5	1D		F05-2525-05	FUSE (SEMKO) (250V T2.5A)	YMX	
⚠ F6 ,7	2B		F05-3121-05	FUSE (SEMKO) (250V T3.15A)	YMX	
-			J19-2647-13	HOLDER		
CN10-17			J13-0075-05	FUSE CLIP		
J6 ,7			J11-0098-05	WIRE CLAMPER		
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
X1			L78-0218-05	RESONATOR		
X1			L78-0267-05	RESONATOR		
CP1 ,2			R90-0810-05	MULTIPLE RESISTOR		
CP3			R90-0809-05	MULTI-COMP 10KX4 J 1/6W		
CP4			R90-0810-05	MULTIPLE RESISTOR		
R34			RD14NB2E331J	RD 330 J 1/4W		
R96			RD14NB2E100J	RD 10 J 1/4W		
R130			RD14NB2E1R0J	RD 1.0 J 1/4W		
R131			RD14NB2E4R7J	RD 4.7 J 1/4W		
R132-134			RS14KB3D820J	FL-PROOF RS 82 J 2W		
R175			RD14NB2E100J	RD 10 J 1/4W		
R180			RD14NB2E2R2J	RD 2.2 J 1/4W		
R181			RD14NB2E331J	RD 330 J 1/4W		
R211-214			RD14NB2E101J	RD 100 J 1/4W		
R216,217			R92-0167-05	METAL-PLATE 0.22 K 5W		
R224,225			RS14KB3D100J	FL-PROOF RS 10 J 2W		
VR1	3C		R29-5049-05	POTENTIOMETER(VOLUME CONTROL)		
VR2			R12-3686-05	TRIMMING POT.(22K)		
K1			S51-2078-05	MAGNETIC RELAY		
K1			S51-2092-05	MAGNETIC RELAY		
K1			S76-0005-05	MAGNETIC RELAY		
K2			S51-2089-05	MAGNETIC RELAY		
K2			S76-0018-05	MAGNETIC RELAY		
D1 ,2			HSS104	DIODE		
D1 ,2			1SS133	DIODE		
D3			HZS3.9N(B2)	ZENER DIODE		
D3			RD3.9ES(B2)	ZENER DIODE		
D4			HSS104	DIODE		

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❹

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D4			1SS133	DIODE		
D5			HZS6.2N(B2)	ZENER DIODE		
D5			RD6.2ES(B2)	ZENER DIODE		
D6 ,7			HZS15N(B)	ZENER DIODE		
D6 ,7			RD15ES(B)	ZENER DIODE		
D8 ,9			D3SBA20F03	DIODE		
D8 ,9			RBV-402LFA	DIODE		
D12 ,13			HSS104	DIODE		
D12 ,13			1SS133	DIODE		
D14			HZS5.1N(B2)	ZENER DIODE		
D14			RD5.1ES(B2)	ZENER DIODE		
D15 -24			HSS104	DIODE		
D15 -24			1SS133	DIODE		
D25			HZS5.1N(B2)	ZENER DIODE		
D25			RD5.1ES(B2)	ZENER DIODE		
D26 ,27			HSS104	DIODE		
D26 ,27			1SS133	DIODE		
D28 ,29			HSS104A	DIODE		
D28 ,29			1SS131	DIODE		
D30 -33			HSS104	DIODE		
D30 -33			1SS133	DIODE		
D34			HSS104A	DIODE		
D34			1SS131	DIODE		
D35			HZS3.9N(B2)	ZENER DIODE		
D35			RD3.9ES(B2)	ZENER DIODE		
D36 ,37			HSS104	DIODE		
D36 ,37			1SS133	DIODE		
D38 -43			HSS104A	DIODE		
D38 -43			1SS131	DIODE		
D44			HSS104	DIODE		
D44			1SS133	DIODE		
D45			HZS5.6N(B2)	ZENER DIODE		
D45			RD5.6ES(B2)	ZENER DIODE		
D46 -49			HSS104	DIODE		
D46 -49			1SS133	DIODE		
D50			HSS104A	DIODE		
D50			1SS131	DIODE		
ED1	2B	*	10-BT-86G	FLUORESCENT INDICATOR TUBE		
IC1 ,2			NJM4565D-D	IC(OP AMP X2)		
IC1 ,2			RC4565D-D	IC(OP AMP X2)		
IC3			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC4			NJM4565D-D	IC(OP AMP X2)		
IC4			RC4565D-D	IC(OP AMP X2)		
IC5			TC9215P	IC(ANALOG SWITCH X 6)		
IC6 ,7			NJM4565D-D	IC(OP AMP X2)		
IC6 ,7			RC4565D-D	IC(OP AMP X2)		
IC8			TC9213P	IC(2CH ELECTRONIC VOLUME)		
IC9			NJM4565D-D	IC(OP AMP X2)		
IC9			RC4565D-D	IC(OP AMP X2)		
IC10			TA8409S	IC(MOTOR CONTROL)		
IC11		*	UPD75268CW-042	IC(4BIT MICROPROCESSOR)		
IC12			PST529D	IC(SYSTEM RESET)		
IC13			BA17815T	IC(VOLTAGE REGULATOR)		
IC13			TA7815S	IC(VOLTAGE REGULATOR/ +15V)		
IC13			UPC7815HF	IC(VOLTAGE REGULATOR/ +15V)		

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5

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IC14		*	STK4024/2K	IC				
IC15		*	STK4030/2K	IC				
Q1 ,2			2SC2878(B)	TRANSISTOR				
Q3			2SA1048(Y,GR)	TRANSISTOR				
Q3			2SA933S(Q,R)	TRANSISTOR				
Q4 ,5			2SC2003(L,K)	TRANSISTOR				
Q6 ,7			2SA1048(Y,GR)	TRANSISTOR				
Q6 ,7			2SA933S(Q,R)	TRANSISTOR				
Q8 ,9			2SC2878(B)	TRANSISTOR				
Q10 ,11			2SA1048(Y,GR)	TRANSISTOR				
Q10 ,11			2SA933S(Q,R)	TRANSISTOR				
Q12			2SD2012	TRANSISTOR				
Q12			2SD2061	TRANSISTOR				
Q12			2SD2374	TRANSISTOR				
Q13			2SC2003(L,K)	TRANSISTOR				
Q14			2SB764	TRANSISTOR				
Q15 ,16			2SC1740S(Q,R)	TRANSISTOR				
Q15 ,16			2SC2458(Y,GR)	TRANSISTOR				
Q17			2SA1048(Y,GR)	TRANSISTOR				
Q17			2SA933S(Q,R)	TRANSISTOR				
Q18 ,19			2SC1740S(Q,R)	TRANSISTOR				
Q18 ,19			2SC2458(Y,GR)	TRANSISTOR				
Q20 ,21			2SA1048(Y,GR)	TRANSISTOR				
Q20 ,21			2SA933S(Q,R)	TRANSISTOR				
Q22 ,23			2SC2878(B)	TRANSISTOR				
Q24 ,25			2SC1845(F,E)	TRANSISTOR				
Q26 ,27			2SC2878(B)	TRANSISTOR				
Q28			2SC2320(E,F)	TRANSISTOR				
Q29 -32			2SC2878(B)	TRANSISTOR				
SWITCH (X13-7040-10)								
⚠ C1			C91-0971-05	FILM	0.01UF	250WV	KP	
⚠ C1			C91-1439-05	FILM	0.01UF	250VAC	YMX	
⚠ F2	1B		F05-1623-05	FUSE (SEMKO)	(250V T1.6A)		YMX	
⚠ F3			F06-3027-05	FUSE (UL)	(250V 3A)		KP	
CN1 ,2			J13-0054-05	FUSE CLIP			YMX	
CN3 ,4			J13-0054-05	FUSE CLIP			KP	
S1 -13	2A,2B		S40-1064-05	PUSH SWITCH				
⚠ S14	2A		S40-1154-05	PUSH SWITCH (POWER TYPE)				
PREAMP (X85-1200-00)								
C1 ,2			CC45FSL1H151J	CERAMIC	150PF	J		
C3			CQ92FM1H223J	MYLAR	0.022UF	J		
C4			CQ92FM1H102J	MYLAR	1000PF	J		
C5			CE04LW1V4R7M	ELECTRO	4.7UF	35WV		
C6			CE04LW1A331M	ELECTRO	330UF	10WV		
C7			CE04LW1V4R7M	ELECTRO	4.7UF	35WV		
C8			CQ92FM1H102J	MYLAR	1000PF	J		
C9			CQ92FM1H223J	MYLAR	0.022UF	J		
C10			CC45FSL1H151J	CERAMIC	150PF	J		
C11 -13			CE04LW1C221M	ELECTRO	220UF	16WV		
C14			CE04LW0J221M	ELECTRO	220UF	6.3WV		
C15			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C16			CE04LW1HR22M	ELECTRO	0.22UF	50WV		

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格			Destination 仕向	Remarks 備考
C19			CF92FV1H683J	MF	0.068UF	J		
C20			CQ92FM1H392J	MYLAR	3900PF	J		
C21			CQ92FM1H472J	MYLAR	4700PF	J		
C22			CF92FV1H333J	MF	0.033UF	J		
C23			CE04HW1E100M	NP-ELEC	10UF	25WV		
C24			CE04LW1H010M	ELECTRO	1.0UF	50WV		
C25			CE04HW1E100M	NP-ELEC	10UF	25WV		
C26			CE04LW1V100M	ELECTRO	10UF	35WV		
C27			CK45FB1H561K	CERAMIC	560PF	K		
C28			CQ92FM1H562J	MYLAR	5600PF	J		
C29			CQ92FM1H682J	MYLAR	6800PF	J		
C30 -32			CE04LW1V100M	ELECTRO	10UF	35WV		
C33			CK45FB1H681K	CERAMIC	680PF	K		
C34			CE04LW1V100M	ELECTRO	10UF	35WV		
C35 ,36			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C37			CE04HW1H0R1M	NP-ELEC	0.1UF	50WV		
C51			CE04LW1C221M	ELECTRO	220UF	16WV		
C52			CE04LW1C470M	ELECTRO	47UF	16WV		
C53 ,54			CE04LW1V100M	ELECTRO	10UF	35WV		
C55			CE04LW1HR33M	ELECTRO	0.33UF	50WV		
C56 ,57			CF92FV1H104J	MF	0.10UF	J		
C58			CK45FB1H681K	CERAMIC	680PF	K		
C59 ,60			CE04LW1H2R2M	ELECTRO	2.2UF	50WV		
C61		*	CE04LW1HR15M	ELECTRO	0.15UF	50WV		
C62			CE04LW1H3R3M	ELECTRO	3.3UF	50WV		
C63 ,64			CF92FV1H154J	MF	0.15UF	J		
C65			CE04LW1H3R3M	ELECTRO	3.3UF	50WV		
C66		*	CE04LW1HR15M	ELECTRO	0.15UF	50WV		
C67 ,68			CE04LW1H2R2M	ELECTRO	2.2UF	50WV		
C69			CK45FB1H681K	CERAMIC	680PF	K		
C70 ,71			CF92FV1H104J	MF	0.10UF	J		
C72			CE04LW1HR33M	ELECTRO	0.33UF	50WV		
C73 ,74			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C75			CE04LW1C221M	ELECTRO	220UF	16WV		
C76			CE04LW1HR47M	ELECTRO	0.47UF	50WV		
C77 ,78			CE04LW1V100M	ELECTRO	10UF	35WV		
C79			CE04LW1H010M	ELECTRO	1.0UF	50WV		
C80			CE04LW1V100M	ELECTRO	10UF	35WV		
C81			CQ92FM1H153J	MYLAR	0.015UF	J		
C82			CQ92FM1H103J	MYLAR	0.010UF	J		
C83			CK45FB1H681K	CERAMIC	680PF	K		
C84			CF92FV1H104J	MF	0.10UF	J		
L1			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)				
X1			L77-1184-05	CRYSTAL RESONATOR				
CP2			R90-0855-05	MULTI-COMP	100KX5	J		
D2			HZS5.6N(B2)	ZENER DIODE				
D2			RD5.6ES(B2)	ZENER DIODE				
IC1			LV1000N	IC				
IC2			LM3364-15	IC				
IC3			UPC78L12J	IC(VOLTAGE REGULATOR/ +12V)				
IC4		*	LA2780	IC				
IC5			UPC78L12J	IC(VOLTAGE REGULATOR/ +12V)				
Q1			2SC3940A	TRANSISTOR				

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
Q2			DTC124ES	DIGITAL TRANSISTOR		
Q2			RN1203	TRANSISTOR		

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SS-992

SPECIFICATIONS

Power Output
Continuous Rated Power Output (FTC)

Center

35 watts minimum RMS, at 8Ω, 1kHz with no more than 0.9% total harmonic distortion.

Rear

15 watts per channel minimum RMS, both channels driven, at 8Ω, 1kHz with no more than 0.9% total harmonic distortion.

Total Harmonic Distortion
Center 0.08% (1kHz, 17.5W, 8Ω)
Rear ..... 0.08% (1kHz, 7.5W+7.5W, 8Ω)
Frequency Response
(LINE OUT) ..... 10Hz~40kHz, 0dB, –3dB
Signal to Noise Ratio
(LINE OUT) ..... 95dB (IHF A)
Input Sensitivity/Impedance 200mV/47kΩ
Output Level/Impedance
LINE OUT 1V/2.2kΩ
PRE OUT 1V/2.2kΩ

General

Power Consumption 90W
AC Outlet (UNSWITCHED)
For the U.S.A. and Canada ... 1 (25W, 0.2A max.)
For other countries ..... 1 (25W max.)
Dimensions ..... W : 440mm (17-5/16")
H : 99mm (3-7/8")
D : 285mm (11-1/4")
Weight (net) 5.6kg (12.3lb)

Note :
KENWOOD follows a policy of continuous advancements in development.
For this reason specifications may be changed without notice.

Note :
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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